

## Appendix B: CALEA JEM Invited and/or Participating Groups List

(In no specific order)

Rev. 3.28.00

### Telecommunications Industry Association (TIA):

*CALEA JEM Web Page:*

[http://www.tiaonline.org/standards/CALEA\\_JEM/](http://www.tiaonline.org/standards/CALEA_JEM/)

*Note: Scroll down for link to purchase the "safe harbor" Interim Standard J-STD-025*

**ATM Forum:** <http://www.atmforum.com/>

**CableLabs, PacketCable Project:** <http://www.packetcable.com/>

*Electronic Surveillance Specification:*

<http://www.packetcable.com/specs/pkt-sp-esp-I01-991229.pdf>

**GSM North America:** <http://www.gsm-pcs.org/northamerica/gsmna.html>

**ETSI:** <http://www.etsi.org/>

*Lawful Interception:* <http://www.etsi.org/technicalactiv/li.htm>

**T1S1:** <http://www.tl.org/tls1/tls1.htm>

**T1P1:** <http://www.tl.org/tlp1/tlp1.htm>

*Working Document on Packet Mode Communication Interception:*

<ftp://ftp.tl.org/pub/tlp1/2000/0p100092.doc>

*A Method for Reporting Access Control Call Identifying Information:*

<ftp://ftp.tl.org/pub/tlp1/2000/0p100860.doc>

*A Method for Reporting SIP/H.323 Signaling:*

<ftp://ftp.tl.org/pub/tlp1/2000/0p100870.doc>

*A Method for Reporting IP Addressing Information:*

<ftp://ftp.tl.org/pub/tlp1/2000/0p100880.doc>

**3GPP:** <http://www.3gpp.org/>

*Lawful Interception Architecture and Functions Specification (33.107):*

[http://www.3gpp.org/ftp/Specs/March\\_00/33\\_series/](http://www.3gpp.org/ftp/Specs/March_00/33_series/)

**3GPP2:** <http://www.3gpp2.org/>

**DSL Forum Technical Committee:** <http://www.adsl.com/>

*Framing and Encapsulation Standards for ADSL: Packet Mode:*  
<http://www.adsl.com/TR-003.doc>

**Frame Relay Forum, Worldwide Technical Committee:**  
<http://www.frforum.com/8000/8004.html>

**Wireless Data Forum:** <http://www.wirelessdata.org/>

**PCIA:** <http://www.pcia.com/>

*CALEA Suite of Standards for Traditional Paging, Advanced Messaging and Ancillary*

*Services Version 1.2 February 19, 1999:*

[http://www.pcia.com/advocacy/Calea\\_su.pdf](http://www.pcia.com/advocacy/Calea_su.pdf)

*CALEA Specification for Traditional Paging, Version 1.0, May 4, 1998:*

[http://www.pcia.com/advocacy/trad\\_pgg.pdf](http://www.pcia.com/advocacy/trad_pgg.pdf)

*CALEA Specification for Advanced Paging, Version 1.0, August 1998:*

[http://www.pcia.com/advocacy/adv\\_msg.pdf](http://www.pcia.com/advocacy/adv_msg.pdf)

*CALEA Specification for Ancillary Services Version 1.0 February 19, 1999:*

[http://www.pcia.com/advocacy/Anc\\_svcs.pdf](http://www.pcia.com/advocacy/Anc_svcs.pdf)

*CALEA, Flexible Deployment Assistance Guide (FBI), January 2000:*

<http://www.pcia.com/advocacy/pdf/flexgide.pdf>

**UWCC:** <http://www.uwcc.org/>

See "Contributions" under TIA CALEA Link

**CDMA Development Group:** <http://www.cdg.org/>

**NCTA:** <http://www.ncta.com/home.html>

**IETF:** <http://www.ietf.org/>

*Position on Wiretapping:* <http://www.ietf.org/rfc/rfc2804.txt?number=2804>

**USTA, Technical Disciplines:** <http://www.usta.org/>

**CTIA:** <http://www.wow-com.com/>

**3Com:** <http://www.3com.com/>

**USWest:** <http://uswest.com>

**Nokia:** <http://nokia.com>

**Agilent Technologies:** <http://www.agilent.com/Top/English/index.html>

**NeuStar:** <http://www.neustar.com/>

**Motorola:** <http://www.Motorola.com/>

**Deutsche Telekom:** <http://www.telekom.de/dtag/ipl2/cda/t1/>

**Nortel Networks:** <http://www.nortelnetworks.com/index.html>  
See T1P1 Links

**Cisco:** <http://www.cisco.com/>

**SBC:** <http://www.sbc.com/>

**Ericsson:** <http://www.Ericsson.com/>

**Lucent:** <http://www.Lucent.com/>

**Bell Atlantic Mobile:** <http://www.bam.com/>

**Pen-Link:** <http://www.PenLink.com/>  
*Downloadable Pen-Link v6.0 Tour:*  
<http://www.penlink.com/html/tourform.html>

**Rogers Wireless:** <http://www.rogers.com/wireless/english/index.html>

**Siemens:** <http://www.siemens.de/ic/index.htm>

**AT&T Wireless Services:** <http://www.attws.com/>

**GTE Wireless:** <http://www.gte.com/>

**Alcatel USA:** <http://www.usa.alcatel.com/>

**Telcordia Technologies:** <http://www.Telcordia.com/>

**ITU-T:** <http://www.itu.int/ITU-T/index.html>

**ITU-R:** <http://www.itu.int/ITU-R/index.html>

**FCC:** <http://www.fcc.gov/>  
*Office of Engineering and Technology:* <http://www.fcc.gov/oet/>  
*Wireless Telecom Bureau:* <http://www.fcc.gov/wtb/>  
*Information and Links:* <http://www.fcc.gov/wtb/csinfo/calea.html>

**FBI:** <http://www.fbi.gov/>

K *CALEA Implementation Section:* <http://www.fbi.gov/programs/calea/calea.htm>

## **Appendix C: JEM 1 Meeting Agenda**

**TIA COMMITTEE TR-45 MOBILE & PERSONAL  
COMMUNICATIONS STANDARDS (TR-45)**

### **Joint Experts Meeting (JEM) on CALEA Packet Surveillance**

**May 3-5, 9am – 5pm PT, Las Vegas, NV**

#### **Proposed Agenda**

##### **1. Call to Order and Opening Remarks**

- JEM Chair remarks (including purpose, scope, acknowledgement of JEM-related work in email discussions and March 20 Q&A call)
- Ground Rules for JEM
  - A. Run like a TIA standards meeting
    - All contributions numbered and addressed
    - All views explored equally
    - Decisions are consensus (not unanimous) based; JEM chair will use TIA engineering manual definition of consensus
    - Final report will contain items discussed and agreements, as well as minority opinions, if unavoidable
  - B. Deal with technical merit, not emotion
  - C. The subject of cost will not be discussed.
  - D. The goal of the JEM is to document a list of technical alternatives to assist TIA in developing their report to the FCC. In addition, issues associated with each alternative will be identified.

##### **2. Introductions and Attendance Registration**

##### **3. Approve Agenda**

##### **4. Distribute, Number, and Assign Contributions**

##### **5. Background**

- Legal (CALEA) and Regulatory (FCC R&O) framework for JEM: Al Gidari, Ed Hall (CTIA)
- J-STD-025 and revisions (history and current status): Terri Brooks and Gary Pellegrino, Chair and Vice-Chair, respectively, of TR45.2 Lawfully Authorized Electronic Surveillance (LAES) Ad Hoc Group

##### **6. Industry contributions on CALEA Packet Surveillance Issue**

- Standards Development Organization (SDO) contributions
- Industry Forum contributions

- Individual company contributions on CALEA Packet Surveillance Issues  
(Encourage presenting contribution only if substantively different from SDO or industry contributions above)
- 7. Identification of Technical Issues and Alternatives**
  - 8. Identify Key Elements of JEM Report**
  - 9. Review JEM Summary**
  - 10. Closing Statements/Adjourn**

## Appendix D: JEM I Meeting Summary

TIA COMMITTEE TR-45 MOBILE & PERSONAL COMMUNICATIONS  
STANDARDS (TR-45)

### Joint Experts Meeting (JEM) on CALEA Packet Surveillance May 3-5, 9am – 5pm PT, Las Vegas, NV

#### Meeting Summary

<<Note that the documenting convention used throughout this report is that **boldface** print represents agenda items, and non-boldface print represents the meeting summary.>>

1. **Call to Order and Opening Remarks:** Peter Musgrove, JEM chair, opened the meeting at 9am on May 3.
  - **JEM Chair remarks (including purpose, scope, acknowledgement of JEM-related work in email discussions and March 20 Q&A call):** The JEM chair reiterated the purpose and scope of the JEM per the initial invite letter (see CALEA JEM link at [www.tiaonline.org](http://www.tiaonline.org) for a copy of this letter). Three major points were made: (1) the JEM is a fact-finding body, (2) the main purpose of the JEM is to determine the feasibility of delivering less than the full content of a packet to law enforcement under a pen register or trap and trace court order, and (3) the information obtained from the JEM will be submitted to TIA to assist with the TIA report due to the FCC by September 30, 2000.

The scope of the JEM included consideration of all packet technologies supported by Telecommunications Services Providers (TSPs) subject to CALEA (including, but not limited to, TDMA, CDMA, PCS, GSM, CDPD, X.25, ATM, ISDN, Frame Relay, Cable, XDSL). Legal issues, speculative interpretation of FCC orders, and the impact of encryption (other than the effect on ability to delivery less than the full content of a packet) were outside the scope of the JEM.

The JEM chair summarized the most significant pre-JEM activities. There was very limited email reflector discussion of a technical nature before the JEM. On the March 20 Q&A conference call, the following topics were covered in depth: CALEA history and background, a review of regulatory and judicial proceedings, and an update on the status of J-STD-025 and its revisions. A summary of the March 20 Q&A session is available on the CALEA JEM website.

- **Ground Rules for JEM:** The JEM chair described the ground rules listed below.
  - A. Run like a TIA standards meeting**
    - All contributions numbered and addressed
    - All views explored equally
    - Decisions are consensus (not unanimous) based; JEM chair will use TIA engineering manual definition of consensus
    - Final report will contain items discussed and agreements, as well as minority opinions, if unavoidable
  - B. Deal with technical merit, not emotion**
  - C. The subject of cost will not be discussed.**
  - E. The goal of the JEM is to document a list of technical alternatives to assist TIA in developing their report to the FCC. In addition, issues associated with each alternative will be identified.**
- 2. Introductions and Attendance Registration:** Approximately 70 persons attended the JEM. A wide range of companies were represented, as was the FBI, the FCC, and the Center for Democracy and Technology (CDT). The attendance roster is posted on the CALEA JEM website.
- 3. Approve Agenda:** The JEM agenda was approved without modifications.
- 4. Distribute, Number, and Assign Contributions:** 9 contributions were distributed during the meeting. All contributions (including the agenda) are posted on the CALEA JEM website. The following illustrates the contribution number, title, and source of each contribution:
  - 100: TIA/EIA/IS-J-STD-025 Lawfully Authorized Electronic Surveillance Standard: TIA and T1
  - 101R1: Method for Identifying Telecommunications Services and Information Services for Packet-Mode Communications Subject to Surveillance Under CALEA: Universal Wireless Communications Consortium (UWCC)
  - 102 Part 1: Lawful Interception Stage Two document: ETSI/3GPP Joint Working Group
  - 102 Part 2: Liaison statement from ETSI SMG 10 WPD/3GPP SA3 LI WG to TIA TR45 on Harmonized Packet Data Intercept Standards: ETSI/3GPP Joint Working Group
  - 103: Liaison from TR45.2 including two sections of J-STD-025 relevant to packet: TIA TR45.2



- 104: Packet Mode Communication Call Identifying Information Reporting: T1
- 105: Approach to CALEA Packet Surveillance: Compaq
- 106: TR45.6 Report to TIA JEM on Packet Data Surveillance Capabilities: TIA TR45.6
- 107: Comments on Technical Aspects of Electronic Surveillance of Packet Mode Communication: Cisco Systems
- 108: Comments on J-STD-025A in regards to packet-mode communication using IP: Cisco Systems
- 109: CTIA Liaison Report: CTIA

## 5. Background

- **Legal (CALEA) and Regulatory (FCC R&O) framework for JEM: Al Gidari, Ed Hall (CTIA):** Al Gidari, CTIA, provided a brief overview of the legal and regulatory framework regarding CALEA. See Frequently Asked Questions (FAQs) on the CALEA JEM website for a detailed summary. Al also pointed out that TSPs may file petitions with the FBI by May 31, 2000 to seek an extension of the CALEA compliance date to March 2001. See FBI website for more information about the flexible deployment plan that must accompany any such filing. Al also indicated that wiretap statistics can be found at [www.uscourts.gov/wiretap99.pdf](http://www.uscourts.gov/wiretap99.pdf). Ed Hall briefly presented contribution 109 (CTIA Liaison report) for information only; this document indicated CTIA's continued support and interest in the topics to be addressed at the JEM.
- **J-STD-025 and revisions (history and current status): Terri Brooks and Gary Pellegrino, Chair and Vice-Chair, respectively, of TR45.2 Lawfully Authorized Electronic Surveillance (LAES) AdHoc Group:** Terri Brooks, chair TR45.2 LAES AdHoc Group, provided a brief overview of the past and ongoing work regarding J-STD-025 and its revisions. Terri pointed out that (1) J-STD-025 was originally published in late 1997, (2) J-STD-025A, which includes support for several FBI "punchlist" items but contained no changes to packet data support, was published in April 2000, and (3) both J-STD-025 and J-STD-025A are slated to be sent out for separate ANSI ballots during May 2000. Terri also provided a brief overview of the packet support methods in J-STD-025.

Contribution 100 (J-STD-025) was introduced by Terri Brooks as "for information only" to the JEM.

Contribution 103 (Liaison from TR45.2) was introduced by Gary Pellegrino, Vice-Chair TR45.2 LAES AdHoc Group. The liaison pointed out that the deployment of an interim packet data solution may be able to be avoided if a

long-term standard solution could be achieved quickly (via the JEM process, quick decision-making by the FCC, and quick standardization activity by relevant standards development organizations). The JEM reached consensus on the following sentences: If a change to the current standard (J-STD-025) is deemed necessary by the FCC, a court, or the industry as a result of this process, the JEM recommends that the current joint open TIA/T1 activity currently underway in the TR45.2 LAES AdHoc group be responsible for completing this task. In its simplest form, this change may just be the inclusion of appropriate references to other standards. The resolution of Contribution 103 is contained entirely in the agreement reached above.

- 6. Industry contributions on CALEA Packet Surveillance Issue:** The JEM participants agreed to allow the contributors of each document under this agenda item to provide an overview and explain the rationale for their recommendations. However, it was agreed that the JEM would not act on any recommendations in any particular contribution until all contributors under this agenda item received the opportunity to present their respective documents in an initial pass. Subsequently, the JEM would revisit and act upon the individual recommendations in a second pass of each contribution. The summary notes below indicate the results of the first pass discussion. The resolution of the recommendations achieved during the second pass are described under agenda items 7 and 8 below.

- **Standards Development Organization (SDO) contributions:**

Contribution 102, Parts 1 and 2 (ETSI/3GPP JWG Liaison) was presented by Bernie McKibben (Motorola). Bernie indicated that a small adhoc group could address the details in these documents at some point during the JEM. Some concerns were voiced that the harmonization issue would have to be worked by an SDO and not by the JEM. Bernie indicated that event reporting only could be done to solve the pen register delivery issue for GPRS packet data. The JEM chair requested that the contributor attempt to summarize the key issues relevant to the JEM to ease discussion of this document in the second pass.

Contribution 104 (T1 Liaison) was presented by Wayne Zeuch (T1 Vice-Chair) and Ron Ryan (T1P1 LAES AdHoc Group Chair). This document provided a list of items that could be sent to law enforcement via event reporting, including access control information, packet data communication addresses, and call associated information. Ron indicated that the difficulty of the event reporting described in this document had not been gauged, and that he expected the JEM to perform this function.

Contribution 106 (TIA TR45.6 Liaison) was presented by Mark Munson (TR45.6 Chair). The document stressed issues with reporting user identity, call identifying information, access control, and serving system information.

- **Industry Forum contributions:**

Contribution 101R1 (UWCC position) was presented by Bill Marshall (AT&T). This document stressed the importance of determining when it is feasible for a system to determine and send call identifying data for packet communications to law enforcement for a pen register or trap and trace court order. The document indicated that the establishment of known telecommunications services should be the trigger for sending call identifying information.

- **Individual company contributions on CALEA Packet Surveillance Issues (Encourage presenting contribution only if substantively different from SDO or industry contributions above):**

Contribution 105 (Compaq document) was presented briefly by the JEM chair, as there was no Compaq representative in attendance. This document stressed the feasibility of using a CALEA “sniffer box” attached at strategic signaling points in a system to fulfill the CALEA obligations for packet surveillance. Since there was no Compaq representative available at the JEM, the JEM chair requested that an advocate would be sought from anyone in attendance on the second day (after allowing for overnight review) to push for the recommendations in this document.

Contribution 107 (Cisco Technical Aspects document) was presented by Chip Sharp. This document stressed the differentiation of content and call identifying information for telecommunications services versus information services, delivery of destination address information without the content, delivery of the source address without the content, and delivery of the content of a packet flow to/from a subject.

Contribution 108 (Cisco comments on J-STD-025A) was provided for information only and was not discussed further at the JEM, as this information is relevant to the SDO modifying the standard (i.e., TR45.2).

## **7. Identification of Technical Issues and Alternatives:**

An initial attempt to reach consensus via a straw poll on general methods for providing call identifying information only (without content) for packet surveillance was not successful.

Very high-level straw poll choices for a preferred packet surveillance method for a given packet stream were proposed as follows:

- (1) Send nothing or all of the packet,
- (2) Send headers or the whole packet, or
- (3) “Peel the onion” on a packet to examine multiple layers.

While the highest number of JEM participant organizations preferred option #1 above, it was determined that the JEM could not reach consensus on which of the choices was most appropriate.

The JEM decided to revisit each of the contributions discussed under agenda item 6 and attempt to quickly identify which individual recommendations are agreed and which are not.

In discussion of contribution 102, the JEM agreed that for GPRS, J-STD-025 messages should be the basis for event reporting to satisfy pen register orders. This agreement was remanded to the drafting group for incorporation into the JEM report.

In discussion of contribution 104, the JEM agreed that for call servers utilizing SIP/H.323/similar signaling, a viable solution for satisfying pen register court orders was to map SIP/H.323/similar signaling to J-STD-025 call events. The contribution also included discussions and examples on reporting communication Path Establishment/Release and investigating the layer 3 header for Source and Destination routing addresses. The content of this document was remanded to the drafting group for incorporation into the JEM report.

In discussion of contribution 106, the JEM agreed that the content of this document should be remanded to the drafting group for incorporation into the JEM report.

In discussion of contribution 101R1, the JEM agreed that the content of this document should be remanded to the drafting group for incorporation into the JEM report.

No advocate surfaced for contribution 105 (with the absence of Compaq, the contributing company). Therefore, the JEM agreed that the JEM report would not contain any material from this contribution.

In discussion of contribution 107, the JEM agreed that the content of this document should be remanded to the drafting group for incorporation into the JEM report. The JEM agreed that "target identification" should be added as an issue in the JEM report.

The JEM agreed contribution 108 was not applicable to the JEM report; however, the JEM agreed that "IPV6" should be added as an issue in the JEM report.

## **8. Identify Key Elements of JEM Report:**

A drafting group worked between the second and third days of the JEM and developed a draft report that was reviewed on Friday, May 5 by all participants. Key elements of the main body of the JEM report and of the technology-specific appendices were identified. See TR45/00.05.31.26 for the most up-to-date version of the draft JEM report.

## **9. Review JEM Summary:**

Significant discussion took place on the content of the draft report on May 5. The editor was remanded the task of updating the main body of the draft report after the JEM. The revised report was agreed to be circulated to the JEM email reflector for comments. Email comments on the main body of the draft report are due to the JEM email reflector by May 22. A drafting session was established for May 23 in Washington, DC to review these email comments and incorporate them into a new draft JEM report. The revised report, along with a meeting summary from the chair, will both be presented to the TIA TR45 meeting on May 31-June 1 as the output from the first JEM session.

## **10. Closing Statements/Adjourn:**

The JEM agreed that additional follow-up is required to provide an opportunity to accept contributions to provide details for the technology-specific appendices of the JEM report. The JEM agreed that a second JEM session is needed, and the task of determining a date for this second JEM was remanded to the JEM steering committee (subsequent to the meeting, the steering committee determined the second JEM session would be held June 27-29 in the Washington, DC area). The JEM decided to remove all substantive appendix material in the draft JEM report at this time in favor of soliciting contributions on the technology-specific appendices for the second JEM session. Assignments were taken for each of the technology-specific appendices (see assignments list in the draft JEM report). The JEM agreed that the deadline (to allow for appropriate pre-meeting review by participants) for submission of the technology-specific appendix contributions to the JEM email reflector is June 15. These contributions, and any others, will be reviewed during the second JEM session.

The chair emphasized the importance of follow-up on the action items noted above. The chair thanked everyone for their participation in the first JEM session. The JEM adjourned at approximately 2pm on May 5.

## **Appendix E: JEM II Meeting Agenda**

**TIA COMMITTEE TR-45 MOBILE & PERSONAL  
COMMUNICATIONS STANDARDS (TR-45)**

### **Second Joint Experts Meeting (JEM) on CALEA Packet Surveillance**

**June 27 (9am start) to June 29 (2pm end)  
St. Regis Hotel, 16<sup>th</sup> St. and K St. NW, Washington, DC**

#### **Proposed Agenda**

- 1. Call to Order and Opening Remarks**
  - JEM Chair remarks (including purpose and scope of both JEM sessions)
  - Ground Rules for the second JEM session
    - A. Run like a TIA standards meeting
      - All contributions numbered and addressed
      - All views explored equally
      - Decisions are consensus (not unanimous) based; JEM chair will use TIA engineering manual definition of consensus
      - Final report will contain items discussed and agreements, as well as minority opinions, if unavoidable
    - B. Deal with technical merit, not emotion
    - C. The subject of cost will not be discussed.
  - F. The goal of the second JEM session is to continue documenting a list of technical alternatives to assist TIA in developing their report to the FCC, with an emphasis on providing details for the technology-specific appendices of the JEM report. In addition, issues associated with each alternative will be identified.
- 2. Introductions and Attendance Registration**
- 3. Approve Agenda**
- 4. Distribute, Number, and Assign Contributions**
- 5. Background**
  - Summary of May 3-5 JEM session: JEM chair/vice-chair
  - Summary of May 23 Drafting Group meeting: JEM chair/vice-chair

- Update on Legal (CALEA) and Regulatory (FCC R&O) issues since first JEM session: Al Gidari (CTIA), Montgomery Kosma (Gibson, Dunn, and Crutcher LLP)
  - Update on J-STD-025 and revisions since first JEM session: Terri Brooks, Chair, TR45.2 Lawfully Authorized Electronic Surveillance (LAES) AdHoc Group
  - Today's Methods for Separating Pen Register Data from Content on Packet Surveillances, Presentation and Demonstration by FBI Engineering Research
6. **Industry contributions on CALEA Packet Surveillance (Main Body of JEM Report)**
    - Standards Development Organization (SDO) contributions
    - Industry Forum contributions
    - Individual company contributions on CALEA Packet Surveillance Issues (Encourage presenting contribution only if substantively different from SDO or industry contributions above)
  7. **Industry contributions on CALEA Packet Surveillance (Technology-Specific Appendices)**
    - Standards Development Organization (SDO) contributions
    - Industry Forum contributions
    - Individual company contributions on CALEA Packet Surveillance Issues (Encourage presenting contribution only if substantively different from SDO or industry contributions above)
  8. **Identification of Technical Issues and Alternatives**
  9. **BREAK: Allow Breakout Drafting Group to Refine Key Elements of JEM Report**
  10. **Review JEM Report**
  11. **Clarification of Post-JEM Process for Finalizing JEM Report for forwarding to TIA**
  12. **Closing Statements/Adjourn**

## **Appendix F: JEM II Meeting Summary**

**TIA COMMITTEE TR-45 MOBILE & PERSONAL  
COMMUNICATIONS STANDARDS (TR-45)**

### **Second Joint Experts Meeting (JEM) on CALEA Packet Surveillance**

**June 27 (9am start) to June 29 (2pm end)  
St. Regis Hotel, 16<sup>th</sup> St. and K St. NW, Washington, DC**

#### **Meeting Summary**

- 1. Call to Order and Opening Remarks:** The chair opened the meeting at 9am on June 27.

- JEM Chair remarks (including purpose and scope of both JEM sessions) The JEM chair reiterated the purpose and scope of the JEM per the initial invite letter (see CALEA JEM link at [www.tiaonline.org](http://www.tiaonline.org) for a copy of this letter). Three major points were made: (1) the JEM is a fact-finding body, (2) the main purpose of the JEM is to determine the feasibility of delivering less than the full content of a packet to law enforcement under a pen register or trap and trace court order, and (3) the information obtained from the JEM will be submitted to TIA to assist with the TIA report due to the FCC by September 30, 2000.

The scope of the JEM included consideration of all packet technologies (including, but not limited to, IP, TDMA, CDMA, PCS, GSM, CDPD, X.25, ATM, ISDN, Frame Relay, Cable, XDSL). Legal issues, speculative interpretation of FCC orders, and the impact of encryption (other than the effect on technical ability to deliver less than the full content of a packet) were outside the scope of the JEM.

See agenda item 5 below for a summary of the first JEM session.



- Ground Rules for the second JEM session: The JEM chair described the ground rules listed below.
  - A. Run like a TIA standards meeting
    - All contributions numbered and addressed
    - All views explored equally
    - Decisions are consensus (not unanimous) based; JEM chair will use TIA engineering manual definition of consensus
    - Final report will contain items discussed and agreements, as well as minority opinions, if unavoidable
  - B. Deal with technical merit, not emotion
  - C. The subject of cost will not be discussed.
  - G. The goal of the second JEM session is to continue documenting a list of technical alternatives to assist TIA in developing their report to the FCC, with an emphasis on providing details for the technology-specific appendices of the JEM report. In addition, issues associated with each alternative will be identified.
- 2. **Introductions and Attendance Registration:** Approximately 80 persons attended the second JEM session. A wide range of companies were represented, as was the FBI and the FCC. The attendance rosters for both JEM sessions are posted on the CALEA JEM website.
- 3. **Approve Agenda:** The agenda was approved as is.
- 4. **Distribute, Number, and Assign Contributions:**

12 contributions were distributed before or during the meeting, and one contribution from the first JEM session (#105 from Compaq) was discussed. All contributions (including the agendas for both JEM sessions) are posted on the CALEA JEM website. The following illustrates the contribution number, title, and source of each new contribution to the second JEM session:

110: Summary of Wireless Technologies for the Appendix (Rogers Wireless)

111: CDMA2000 Wireless IP Appendix (TIA TR45.6)

112: X.25 over ISDN BRI Technology Appendix (T1)

113: ATM Technology Appendix (T1)

114: Frame Relay Technology Appendix (U S WEST)

115: GPRS Technology Appendix (T1)

116: Call Associated Signaling Reporting (T1)

117: PacketCable Technology Appendix (PacketCable Project of CableLabs)

118: CDPD Technology Appendix (Lucent)

119: IP Technology Appendix (Cisco)

120: Functional Model for Packet Mode Surveillance and Use of Separation Function (FBI CIS)

120a: Information to be added to the IP Appendix (FBI CIS)

## **5. Background**

- Summary of May 3-5 JEM session: JEM chair/vice-chair: Peter Musgrove provided a brief verbal readout. See written meeting summary of the first JEM session on the CALEA JEM website.
- Summary of May 23 Drafting Group meeting: JEM chair/vice-chair: Peter Musgrove pointed out that the drafting group only incorporated comments that were deemed to be within the agreements of the first JEM session. Many comments received via the email reflector were outside that scope and thus were not incorporated by the drafting group. Peter noted that folks are expected to bring up these comments at the second JEM session.
- Update on Legal (CALEA) and Regulatory (FCC R&O) issues since first JEM session: Al Gidari (CTIA), Montgomery Kosma (Gibson, Dunn, and Crutcher LLP): Montgomery Kosma provided a brief overview of recent judicial proceedings with regard to CALEA, including activity on the pending appeal of the FCC Report and Order before the US Court of Appeals for the District of Columbia.
- Update on J-STD-025 and revisions since first JEM session: Terri Brooks, Chair, TR45.2 Lawfully Authorized Electronic Surveillance (LAES) AdHoc Group: Terri Brooks reported that July 24 is the deadline for ballot comments on the ANSI version of J-STD-025, and August 4 is the deadline for ballot comments on the ANSI version of J-STD-025A. The T1 ballot comment deadline on the ANSI version of J-STD-025 is June 28. The TR45.2 LAES adhoc group ballot review meeting is currently targeted for August 22-24 in Montreal.
- Today's Methods for Separating Pen Register Data from Content on Packet Surveillances, Presentation and Demonstration by FBI Engineering Research: Greg Kesner and Eddie Hill (from the FBI's Engineering Research Facility in Quantico, VA) provided the FBI presentation of their so-called "Carnivore" software which is purportedly able to filter specific information for packet sessions for pen register orders. This software apparently screens IP data fields at various levels in the full packet stream containing the subject's communications. The presentation was used as a basis for the FBI contribution #120 regarding the proposed introduction of a separation function into a TSP network that would filter identifying information from a particular packet stream (see discussion of that document below).

## **6. Industry contributions on CALEA Packet Surveillance (Main Body of JEM Report)**

- Standards Development Organization (SDO) contributions: none.
- Industry Forum contributions: none.
- Individual company contributions on CALEA Packet Surveillance Issues

#120 (Functional Model for Packet Mode Surveillance and Use of Separation Function from the FBI Calea Implementation Section) was presented by Lou Degni and Ken Coon. The recommendations in this contribution were not accepted; however, the task of incorporating a description and a list of issues associated with the separation function was remanded to the drafting group.

(Encourage presenting contribution only if substantively different from SDO or industry contributions above)

**7. Industry contributions on CALEA Packet Surveillance (Technology-Specific Appendices)**

- Standards Development Organization (SDO) contributions

#111 (Draft appendix for CDMA2000 Wireless IP from TR45.6) was presented by Mark Munson. The group accepted the content of this document and remanded to the drafting group the task of incorporating into the JEM report. AT&T brought up the issue of IP overlap with this and other technologies in the JEM report appendices. The drafting group can consider splitting IP considerations out of each technology-specific appendix, if needed. Some folks commented that overlap with IP text is necessary to maintain logical flow of appendices.

#112 (Draft X.25 over ISDN BRI Technology Appendix for TIA JEM II on Packet Data Surveillance Capabilities from Committee T1S1) was presented by Jay Hilton. This document was accepted and remanded to the drafting group for incorporation into the JEM report.

#113 (Draft ATM Technology Appendix for TIA JEM II on Packet Data Surveillance Capabilities from Committee T1S1) was presented by Jay Hilton, who attributed the input to David Hoffman of U S WEST. This document was accepted and remanded to the drafting group for incorporation into the JEM report. Jay commented that the drafting group may want to consider accepting only a subset of this text for eventual incorporation into the JEM report.

#115 (GPRS Specific Information for TIA JEM Report Appendices from T1P1) was presented by John Menard on behalf of Ron Ryan. This document was accepted and remanded to the drafting group for incorporation into the JEM report. The drafting group was asked to remove the ASN.1 encoding without losing any of the pertinent information contained therein.

#116 (Call Associated Signaling Reporting for TIA JEM Report Appendices from T1P1) was presented by John Menard on behalf of Ron Ryan. This document was accepted and remanded to the drafting group for incorporation into the JEM

report. The drafting group was asked to decide whether this should be a separate appendix or added to the appendix that is the subject of document #115.

- Industry Forum contributions

#117R1 (PacketCable Technology-Specific Subchapter from the PacketCable project of CableLabs) was presented by Bill Marshall. The drafting group should change “should” to “could” or provide explanatory text stating that suggested IAP locations in this appendix are examples only and are not mandated implementations. Bill asked that three different appendices should be used: one for Cable (physical media), one as an add-on to the appendix on IP, and one devoted to a CMS-controlled VOIP appendix. Handle ASN.1 material same as document #115. Change “we” to “Cablelabs” in reference to 5% capacity number. This document was accepted with modifications noted above and remanded to the drafting group for incorporation into the JEM report.

- Individual company contributions on CALEA Packet Surveillance Issues (Encourage presenting contribution only if substantively different from SDO or industry contributions above)

#110 (CALEA Packet Data JEM: Appendix Summary from Rogers Wireless) was presented by the chair (Peter Musgrove) on behalf of Ed O’Leary. Peter asked if an advocate would be willing to come forward to push for the recommendation in this document. As no advocate was identified, the recommendation in this contribution was not accepted.

#114 (Draft Frame Relay Technology Appendix for TIA JEM II on Packet DataSurveillance Capabilities from U S WEST) was presented by Jay Hilton (on behalf of David Hoffman). Jay commented that T1S1 had not approved this document, and that they will review output of second JEM session at mid-July T1S1 meeting.

This document was accepted and remanded to the drafting group for incorporation into the JEM report

#118 (Draft CDPD appendix for TIA JEM on Packet Data Surveillance Capabilities from Lucent) was presented by William Waung. This document was accepted and remanded to the drafting group for incorporation into the JEM report. It was pointed out that the JEM (near the end of the meeting) should develop a plan for this and some other appendices to fill in the technical feasibility section before the completion of the JEM report.

#119 (Proposed IP Appendix for FCC Report from Cisco) was presented by Chip Sharp. This document was accepted and remanded to the drafting group for incorporation into the JEM report.

## 7.5. New Business

#105 (Approach to CALEA Packet to Surveillance from Compaq) was presented by Mark Montz. The recommendations in this document were determined to be closely related to those in the FBI documents #120 and #120a. The largest difference is the provider of the separation function (filtering) software. The Compaq contribution says that open source code should be used in the CALEA sniffer box (i.e., same as the FBI's "separation function"). There were comments for and against the idea of having source code open to the public. The recommendations in this contribution were not accepted; however, the group agreed to remand to the drafting group the task of incorporating a description and a list of issues associated with the separation function and the software code associated with it. These recommendations were discussed in conjunction with those in document #120 and #120a.

#120a (FBI contribution on suggested changes to the IP appendix) was presented by Ken Coon. The scalability of the separation function was raised as an issue by AT&T, as well as the feasibility of providing weekly updates to separation function software. SBC raised security and legal issues of the FBI's code or a neutral group's code going into the TSP's network as a separation function. The group agreed to remand the FBI document #120a to the drafting group and encouraged a new section to be added that describes the separation function and the issues associated with it.

8. **Identification of Technical Issues and Alternatives:** This item was handled during the discussion of each of the contributions (see discussion above).
9. **BREAK: Allow Breakout Drafting Group to Refine Key Elements of JEM Report:** The JEM broke at 12:15pm on Wednesday to allow the drafting group to convene at 2pm to revise the JEM report based on the resolution of each of the contributions.
10. **Review JEM Report:** On Thursday morning, Brye Bonner (editor) led discussion describing the output of the drafting session. Many changes were made in real time to the draft JEM report. Other changes not added in real time were remanded to the editor for incorporation after the meeting: (1) The group agreed to add footnote in section 5.2.1 to say that limitation of packet stream to one user's information due to J-STD-025 is an improvement over the current state of the art used by the FBI in which their Carnivore software performs a filtering function on an information pipe from an ISP (with information for multiple users). It was pointed out that privacy groups should understand this improvement afforded by the existing J-STD-025 method for packet surveillance. (2) In GPRS appendix, the editor was asked to use the T1P1 text from the first JEM session as input to creating an introduction section. The JEM steering committee was remanded the task of preparing an overview of "JEM 2 Output" for the JEM report.

**11. Clarification of Post-JEM Process for Finalizing JEM Report for forwarding to TIA:**

- (1) The editor will provide a revised draft JEM report by June 30, 2000 to the JEM email reflector.
- (2) Email comments on this revised draft JEM report are due Monday, July 24.
- (3) Drafting session will be held July 27 (9am start) and July 28 (noon end) in the Washington, DC area. The work of the drafting session is to be conducted in the context of existing JEM agreements.
- (4) Revised draft JEM report will be sent to the reflector by August 4.
- (5) Final JEM participant comments on the draft JEM report are due to the reflector by August 16.
- (6) JEM Steering committee will finalize report and send to reflector (with courtesy copy to TR45, T1, and other SDOs/organizations) and to TIA. Finalization will be done in the context of existing JEM agreements.
- (7) TIA will use JEM report to create the TIA report due to the FCC on September 30, 2000.

**12. Closing Statements/Adjourn:** The chair thanked the vice-chair and editor for their work on JEM activities. The chair thanked all JEM participants for their contributions and for the resulting enlightening discussion. The second JEM session adjourned around 11:45am on Thursday, June 29, 2000.